# What a Monkey Can Teach Us About Buying Sweaters and Paying For College 

They're really making impressive advances in the area of monkey consumerism. Multiple studies have shown that when monkeys are taught to pay for things, they demonstrate behaviors identical to many humans, including spending money on short term gratification, spending all they have instead of saving, and even stealing currency from their fellow monkey buddies. If human beings didn't make some of the same bad decisions with their own spending and saving, we'd be able to feel even more superior to our extremely distant cousins, but since we do, we actually have a chance to learn something about ourselves by studying their behavior.

In one recent study conducted at Yale University's Comparative Cognition Laboratory, food buying monkeys were given a choice between two different food vendors. One vendor always showed only one piece of food available at a given price, but upon transacting with that vendor, the monkey diners were always given a second piece. The other vendor also always showed only one piece of the same kind of food at the same given price, but sometimes he would only give them that one piece
of food, and at other times he'd give them three pieces of food. So between the two vendors, one was always giving two pieces, and the other was giving one or three pieces. Eventually, all the monkeys were always buying their food from the guy who gave them the guaranteed extra piece of food, forgoing the opportunity to sometimes get two extra pieces of food. Apparently monkeys prefer a guaranteed value when dining out.

They then switched the experiment and started showing three pieces of food available at the given price. That starting point, three pieces to start instead of one, had a surprising impact on these monkey diners. Instead of always adding one piece, one vendor would always remove a piece of food and only give them two, whereas the other vendor would sometimes remove two pieces leaving them with only one, but sometimes would give them all three. So exactly like before, for the same price, one vendor was always giving them two pieces of food, and one was sometimes giving one and sometimes giving three. Based on the first experiment's outcomes, you'd think the monkeys would always go for the guar-
anteed two pieces of food, however the monkeys changed their behavior and instead started favoring the vendor who would sometimes give them one, but sometimes give them all three. Apparently, monkeys prefer to gamble with their dining experience when faced with the prospect of not getting their perceived full value.

What conclusions did the researchers draw from this study? One conclusion was that the monkeys actually increased their risk in order to give themselves the opportunity to avoid losses, even though it meant an even bigger loss when they did experience one. We can draw a lot of parallels to human investor behavior with feeling like losses are to be avoided, even if it means taking more risk to avoid them. Another conclusion, and the focus of this piece, was that monkeys, like humans, value purchases in relative terms, not absolute terms.

In the first experiment the monkeys chose getting a guaranteed second piece of food and forgoing the chance to get even more extra food because they felt like they were paying for one but getting two. Their sense of value was relative to their starting point: they felt they were getting a deal. In the second experiment, even though they were also always guaranteed to get two pieces of food for the same price as before, this time around they perceived they were paying for three but only getting two, and they'd rather pay for the chance to get all three even when it meant sometimes only getting one. In this case their sense of value was based on three pieces of food, and a potential for no loss was worth the risk of sometimes getting one instead of always getting two.

Now, before you judge these lesser primates too harshly, realize that most of us, and maybe even all of us, fall prey to these same forces on a frequent basis. Case in point: buying things on sale. There are studies and mountains of anecdotal evidence pointing to how easy it is to fool us when an original price is advertised and then a lower price is ultimately offered. Our sense of valuing that item is relative to the "original" price, and not to the absolute price itself. Consider two sweaters, both costing $\$ 50$. One is listed as originally costing $\$ 100$, and when we try it on it fits OK and it looks good enough. The other is listed as originally costing \$50, so it's not on sale, but when we try it on it fits better than the first and overall looks better than the first. If we were given these two sweaters as gifts without knowing the prices, you know which one would be at the top of the sweater pile and which one would be at the bottom. However, once price is factored in and we feel like we're saving $\$ 50$, a high percentage of us would buy the sweater that doesn't fit quite as well and doesn't look quite as good because we feel like we're getting a relative deal. Of course we're not, though, because at the end of the day we're still spending $\$ 50$ but for a sweater we'll probably wear less than the full price one had we bought it instead. Somehow our brain feels like we saved \$50 even though we were never going to spend \$100 in the first place.

Come on, admit it; you've done it. Maybe not with a sweater, but with some other purchase. Research has shown we get more enjoyment from drinking expensive wine than cheaper wine, even when it's the same wine just with different price tags! Because our brain prefers to value things in relative as opposed to absolute terms just like those monkeys', it can be fooled quite easily, and nearly every company in the world selling consumer products knows this and exploits it. Just think
 of the phrase "the more you spend, the more you save". No, the more you spend, the more you spend. But what's the harm in wasting money on clothes and overspending on wine occasionally, right? Probably not much when kept to a minimum, but when that predictable error is repeated over and over, it does add up, especially on big ticket items like cars.

And college educations. Yes, even college educations, and all those institutes of higher learning know the weaknesses of our monkey brains too. Public and private colleges and universities are feeling financially squeezed these
days due to a variety of factors, and this impacts how they compete for students. One way they compete is by offering a $\$ 100$ sweater for $\$ 50$, though in reality it's more like a $\$ 160,000$ education for $\$ 80,000$.

According to the College Board's Annual Survey of Colleges; Trends in Student Aid 2015, the average percentage of the published tuition and fees at private nonprofit four-year institutions actually paid by students, which for years was around $60 \%$, started to decline further after the 2007-2009 financial crisis until today where students are paying roughly $45 \%$ of the published tuition and fees:


In August of 2015, the National Association of College and University Business Officers reported that almost $90 \%$ of freshmen received grant aid from their colleges, an all-time high. That money covered more than half of the tuition and fees for those incoming students (as the College Board's data shows above). Why not just drop the published price of the education if what students and parents are actually paying is so much less?

One of our advisers has a close contact who is the Director of Admissions at a private college in the Midwest. While discussing college budgets being squeezed like never before, he acknowledged all colleges know you'd rather pay $\$ 80,000$ for a perceived $\$ 160,000$ education than $\$ 80,000$ for a perceived $\$ 80,000$ education. Even at the same institution, the students are paying a wide variety of prices, and one student may be offered significantly more in scholarship and grant money than another similar student. To quote our source on just how individualized these differing net costs paid can be, he said colleges and universities "build their institutional budgets with the assumption that they will have a student population composed of members who are each paying a different rate to attend--sometimes so highly individualized that a student body with 2000 students may have hundreds of different rates--and that rate is generally less than full freight."

When it comes to spending on college, it really pays to look beyond the price and fight off that urge to make decisions based on how much of a discount you're getting. Are you going to buy the experience that doesn't fit as well just because you're getting a great deal? Sure, getting a huge discount off an expensive tuition is great, but not if the school isn't a good fit, or is too close or too far from home, or any other factor that students use to value their
college experiences. At the end of the day someone will be paying $\$ 80,000$ or more, possibly much more; make sure you're valuing the purchase based on dollars paid, not dollars "saved".

Unfortunately we do have to report that monkey spenders are actually better at recognizing when a $\$ 5$ bottle of wine is the same as a $\$ 50$ bottle of wine. We're paraphrasing here, as those kind people at Yale didn't really encourage monkeys to crack open bottles of wine, but instead used other methods of creating expensive brands versus cheaper brands. In the end, after teaching monkeys that cookie 1 was twice as expensive as cookie 2 , they evened out the prices on the cookies and the monkeys did not suddenly flock to cookie 1 , thinking they were suddenly getting a deal by buying a premium cookie at a regular cookie price. No, to a monkey a cookie is a cookie, just as to us a sweater should just be a sweater, and a college education should be more than just the perceived discount. So the next time you're feeling like a deal is too good to pass up, especially when you weren't planning on purchasing that item that day, and especially if you DON'T NEED IT, try to behave better than a monkey.

## Market Update - Focus on the Facts, Not the Hype

With the S\&P 500 up over $5 \%$ in the month of March, it's easy to feel like the worst is behind us. We think that would be a mistake. Rather than embark on a long technical account of why we think so, we'll list our key points in bullet fashion so as to not over complicate the matter.

A continued defensive investment posture is warranted for the following reasons:

- The longer term trend since the market (S\&P 500) peaked in May of 2015 is still down. Although the S\&P 500 and Dow are just above their 200-day moving averages, the NYSE, Nasdaq, and Russell 2000 are all still below. In addition, in most of those indices, we see a pattern of lower highs and lower lows. In other words, after each new low, the subsequent market rebounds fail to move higher than their previous peaks. This price action is typical of a downward trending or bear market. Until this pattern reverses, the path of least resistance for the markets remains down.
- Broad market benchmarks (NYSE and Russell 2000) continue to be weaker than the capitalization and price-weighted indices (S\&P 500 and Dow Industrials). This indicates that most stocks are still experiencing weakness relative to a larger few.
- Our market sentiment model utilizing Put/Call options volume indicates fairly extreme complacency, which can oftentimes correspond closely with market turning points. Given the current technical headwinds that the market faces as we outlined in bullet point one, this bears close watching.
- The economic situation at the moment is far from strong both domestically and globally. As we've cited recently, leading economic indicators such as manufacturing new orders are down significantly from one year ago and in recession territory. In addition, inventory to sales ratios are at recession levels as well. Meanwhile, the data referenced by those wanting us to believe the economy is on solid footing are all lagging indicators such as unemployment levels and new claims for unemployment insurance. Both of those indicators we know historically are at their best just before markets fall and the economy begins to contract. So, using them as rationale for good times ahead is either misguided or just plain disingenuous depending on who's making the argument.
- Although the Bureau of Labor Statistics shows the employment picture getting better- as mentioned above - when looking at U.S. Treasury data showing gross receipts from taxes withheld from paychecks by employers, the picture is deteriorating. In other words, even though there are apparently more jobs being added and fewer people on the unemployment doles, less money is being collected from employees in the form of taxes. This supports the argument that although more people are working, they're not working in full-time positions that pay well. Hardly a good scenario for sustained economic growth and corporate profits.
- Corporate profits - They're falling. Year over year, they're down over $7 \%$ and much more than that when you look at GAAP earnings since their peak in late 2014.
- Valuation - Markets are extremely expensive by historical standards. Using GAAP earnings over the last 12 months of approximately 84 , the Price to Earnings ratio is at roughly 23 . That's well above the average of 15-16, and when you consider that profit margins are still near record highs, there's ample room for earnings to continue their slide which would move the P/E ratio higher or serve to keep it the same even in a falling market. Bottom line, it's a long way down should things get closer to their averages.
- Finally, recessions and bear markets are normal and happen about every 5-7 years on average. We're due and that's okay. It's normal and shouldn't be feared, but it is. That's because central banks around the world know that should the wealth effect dissipate along with asset prices, there's a good chance the world moves into recession. So why is recession feared by central banks? Because in a world built on so much debt, without growth, that debt pyramid could begin to crumble leading to chaos and a challenging of the status quo. With Japan and Europe moving to zero interest rates over the last few weeks and the Federal Reserve here at home backing away from their plan to raise rates gradually over the course of this year, what we may be starting to see is a bit of panic among the central banks and the privileged elite who steer them. If markets interpret these Hail Mary efforts as we have, they could lose confidence and start to take cues from the data right in front of them, which as we've outlined, isn't the best. Until we have clear evidence to the contrary, continued caution and a heavily defensive portfolio positioning seems prudent.

